LAKE: KEZAR L (VLMP 17)
TOWN: LOVELL
COUNTY: OXFORD

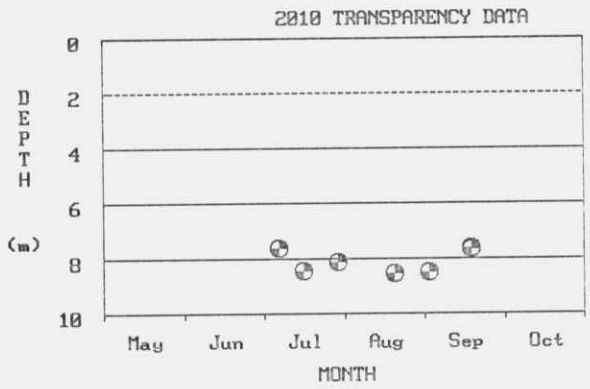
MIDAS: 97
TRUE BASIN: 1
SAMPLE STATION: 2

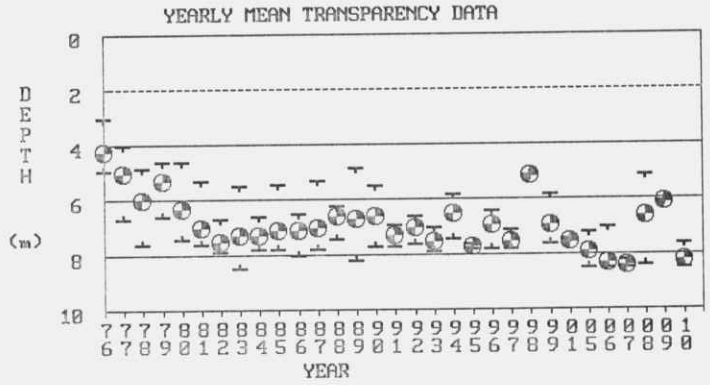
WHOLE LAKE INFORMATION
MAX. DEPTH: 47 m. (155 ft.)
MEAN DEPTH: 10 m. (34 ft.)
DELORME ATLAS #: 10
USGS QUAD: CENTER LOVELL
IFW REGION A: Sebago Lake (Gray)
IFW FISH. MANAGMENT: Warmwater & Coldwater

TRUE BASIN CHARACTERISTICS
SURFACE AREA: 741.2 ha. (1831.5 a.)
FLUSHING RATE: 0.70 flushes/yr.
VOLUME: 102376075.0 cu. m. (83047 ac.-ft.)
DIRECT DRAINAGE AREA: 82.34 sq. km. (31.79 sq. mi.)

PLEASE NOTE THE FOLLOWING: The SAMPLE STATION # refers to the location sampled. The term TRUE BASIN is used to define areas within a lake that are separated by shallow reefs or shoals and therefore function as separate lakes. There are approximately 50 lakes in the state that have more than 1 True Basin. True Basin Characteristics are now being included in the first section of these reports to enable users of the Phosphorous Loading Methodology to better evaluate the data. If there is no data for a particular True Basin, True Basin Characteristics must be obtained from the DEP. KEZAR L has 2 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:





Note: 2010 graphs may indicate multiple readings taken on a given day.

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

[* indicates that Secchi disk was visable at bottom of lake (or one reading used in calculation was visable)].

	MEAN COLOR	MEAN pH	MEAN ALK	MEAN COND.	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES EPI PHOS			
	(SPU)		(mg/l)	(uS	EPI	SURF	BOT.	PRO.											
YEAR				/cm)	CORE	GRAB	GRAB	GRAB	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1976	-	-	-	-	-	-	-	-	3.0*	4.2*	4.9	3	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	-	-	4.0*	5.0*	6.7*	3	-	-	-	-	-	-	-
1978	-	-	-	-	-	-	-	-	4.8	6.0*	7.6	5	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	4.6*	5.3*	6.6*	6	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	4.6	6.3*	7.4*	6	-	-	-	-	-	-	-
1981	-	-	-	-	-	-	-	-	5.3	7.0	7.6	6	-	-	-	-	-	32	-
1982	-	-	-	-	-	-	-	-	6.7	7.5*	7.9*	5	-	-	-	-	-	-	-
1983	-	6.67	-	-	-	-	-	-	5.5	7.3*	8.5*	5	-	-	-	-	-	-	-
1984	-	6.60	-	-	-	-	-	-	6.6	7.3*	7.8	4	-	-	-	-	-	-	-
1985	-	6.34	-	-	-	-	-	-	5.4	7.1	7.8	5	-	-	-	-	-	31	-
1986	-	6.40	-	-	-	-	-	-	6.5	7.1*	8.0*	4	-	-	-	-	-	-	-
1987	-	-	-	-	7	-	-	-	5.3	7.0*	7.8*	6	-	-	-	-	-	-	-
1988	-	-	-	-	-	-	-	-	6.2	6.6	7.4	4	-	-	-	-	-	-	-
1989	-	-	-	-	-	-	-	-	4.8	6.7*	8.2*	6	-	-	-	-	-	-	-
1990	-	-	-	-	10	-	-	-	5.5	6.6	7.7	5	-	-	-	-	-	34	-

LAKE: KEZAR L (VLMP 17)
TOWN: LOVELL
COUNTY: OXFORD

MIDAS: 97
*TRUE BASIN: 1
*SAMPLE STATION: 2

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS /cm)	TOTAL PHOS. MEANS (ppb) EPI CORE	SURF GRAB	BOT. GRAB	PRO. GRAB	SECCHI DISK (m.) MIN.	MEAN	MAX.	N	CHLOROPHYLL A(ppb) MIN.	MEAN	MAX.	TROPHIC STATE INDICES EPI PHOS C	G	SEC	CHL
YEAR																			
1991	-	-	-	-	8	-	-	-	6.9	7.3	7.7	5	-	-	-	-	-	30	-
1992	-	-	-	-	-	-	-	-	6.6	7.0	7.6	5	-	-	-	-	-	32	-
1993	-	-	-	-	2	-	-	-	7.0	7.5*	7.9*	2	-	-	-	-	-	-	-
1994	-	-	-	-	-	-	-	-	5.8	6.5	7.4	4	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-	7.6	7.7*	7.8*	2	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-	6.4	6.9	7.8	5	-	-	-	-	-	32	-
1997	-	-	-	-	-	-	-	-	7.1	7.5	7.8	4	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-	5.1	5.1	5.1	1	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-	5.8	6.9	7.6	3	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-	7.4	7.5	7.5	2	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	7.2	7.9*	8.5	4	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	7.0	8.3*	8.5	3	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	8.2	8.4*	8.5*	3	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	5.1	6.6	8.4	4	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	6.1	6.1	6.1	1	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	7.6	8.2*	8.5*	3	-	-	-	-	-	-	-
SUMMARY:	-	6.48	-	-	7	-	-	-	3.0*	6.9*	8.5*	31	-	-	-	-	-	32	-

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

	SAMPLE DATE							
DEPTH	08/02/78		08/30/78		08/29/93		09/18/08	
m	°C	ppm	°C	ppm	°C	ppm	°C	ppm
0.0	23.5	99.9	22.5	99.9	24.3	8.3	19.7	8.7
1.0	-	-	-	-	24.3	8.3	19.7	8.6
2.0	-	-	-	-	24.3	8.3	19.7	8.6
3.0	-	-	-	-	24.3	8.3	19.7	8.6
4.0	-	-	-	-	24.2	8.3	19.7	8.6
5.0	-	-	-	-	24.2	8.3	19.7	8.6
6.0	-	-	-	-	24.2	8.3	19.7	8.6
7.0	-	-	-	-	23.6	8.3	19.7	8.6
8.0	-	-	-	-	20.5	7.4	19.7	8.6
9.0	-	-	-	-	-	-	19.4	7.4

WATER QUALITY SUMMARY

KEZAR LAKE, LOVELL
Midas: 0097, Sample Station: 02 - Middle Bay

The Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of lake data to evaluate water quality, track algal blooms, and determine water quality trends. This dataset does not include bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring datasets for this station in Kezar Lake have been collected since 1976. During this period, 8 years of basic chemical information was collected in addition to Secchi Disk Transparencies (SDT). This information, in addition to data collected from Station 01 indicates that the water quality of Kezar Lake is excellent. The potential for nuisance algal blooms on Kezar Lake is low.

Water Quality Measures: Station 02 of Kezar Lake has an average SDT of 6.7 m (22.0 ft). Most of these readings are limited by the depth of the station and are thus an underestimate of water quality. The range of water column TP for Station 02 of Kezar Lake is 2-10 parts per billion (ppb) with an average of 7 ppb. Recent dissolved oxygen (DO) profiles show no DO depletion at this site. Dissolved oxygen data obtained from the deepest station indicate good levels there as well. The potential for TP to leave the bottom sediments and become available to algae in the water column (internal loading) is low. Oxygen levels below 5 parts per million stress certain cold water fish, and a persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the Internet at http://www.lakesofmaine.org/ and/or http://www.maine.gov/dep/blwq/lake.htm, or telephone the ME-DEP at 207-287-3901 or the VLMP at 207-783-7733.

Filename: keza0097_02, Revised: 12/06, By: lb

LAKE: KEZAR L (VLMP 17)
TOWN: LOVELL
COUNTY: OXFORD

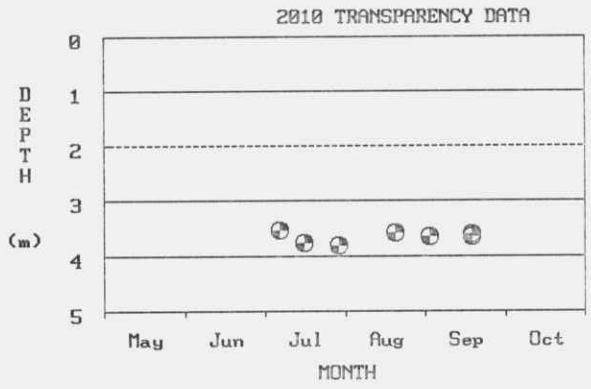
MIDAS: 97
TRUE BASIN: 3
SAMPLE STATION: 3

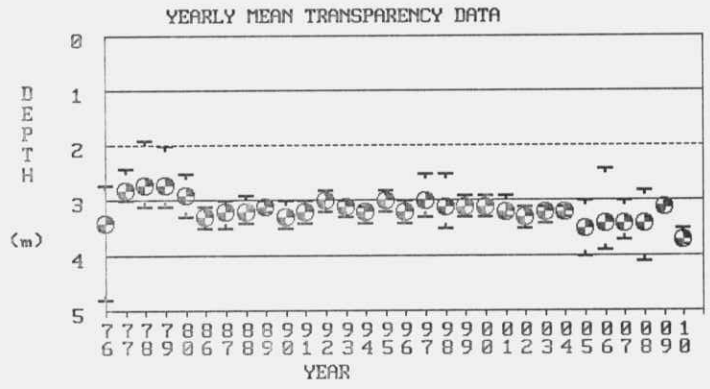
WHOLE LAKE INFORMATION
MAX. DEPTH: 47 m. (155 ft.)
MEAN DEPTH: 10 m. (34 ft.)
DELORME ATLAS #: 10
USGS QUAD: CENTER LOVELL
IFW REGION A: Sebago Lake (Gray)
IFW FISH. MANAGMENT: Warmwater & Coldwater

TRUE BASIN CHARACTERISTICS
SURFACE AREA: 280.4 ha. (692.9 a.)
FLUSHING RATE: 14.80 flushes/yr.
VOLUME: 5965855.0 cu. m. (4839 ac.-ft.)
DIRECT DRAINAGE AREA: 25.76 sq. km. (9.95 sq. mi.)

PLEASE NOTE THE FOLLOWING: The SAMPLE STATION # refers to the location sampled. The term TRUE BASIN is used to define areas within a lake that are separated by shallow reefs or shoals and therefore function as separate lakes. There are approximately 50 lakes in the state that have more than 1 True Basin. True Basin Characteristics are now being included in the first section of these reports to enable users of the Phosphorous Loading Methodology to better evaluate the data. If there is no data for a particular True Basin, True Basin Characteristics must be obtained from the DEP. KEZAR L has 2 True Basin(s).

SECCHI DISK TRANSPARENCY GRAPHS:





Note: 2010 graphs may indicate multiple readings taken on a given day.

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

[* indicates that Secchi disk was visable at bottom of lake (or one reading used in calculation was visable)].

	MEAN COLOR	MEAN pH	MEAN ALK	MEAN COND.	TOTAL PHOS. MEANS (ppb)				SECCHI DISK (m.)				CHLOROPHYLL A(ppb)			TROPHIC STATE INDICES			
	(SPU)		(mg/l)	(uS	EPI	SURF	BOT.	PRO.								EPI PHOS			
YEAR				/cm)	CORE	GRAB	GRAB	GRAB	MIN.	MEAN	MAX.	N	MIN.	MEAN	MAX.	C	G	SEC	CHL
1976	-	-	-	-	-	-	-	-	2.7*	3.4*	4.8*	3	-	-	-	-	-	-	-
1977	-	-	-	-	-	-	-	-	2.4*	2.8*	3.0*	3	-	-	-	-	-	-	-
1978	-	-	-	-	-	-	-	-	1.9*	2.7*	3.1*	5	-	-	-	-	-	-	-
1979	-	-	-	-	-	-	-	-	2.0*	2.7*	3.1*	6	-	-	-	-	-	-	-
1980	-	-	-	-	-	-	-	-	2.5*	2.9*	3.3*	6	-	-	-	-	-	-	-
1986	-	6.10	-	-	-	-	-	-	3.1*	3.3*	3.5*	3	-	-	-	-	-	-	-
1987	-	6.50	-	-	12	-	-	-	3.0*	3.2*	3.5*	6	1.1	2.0	3.3	47	-	-	-
1988	-	6.40	5.0	-	6	-	-	-	2.9*	3.2*	3.4*	4	-	-	-	-	-	-	-
1989	-	6.90	-	-	9	-	-	-	3.0*	3.1*	3.2*	6	-	-	-	38	-	-	-
1990	-	-	-	-	9	-	-	-	3.0*	3.3*	3.5*	6	-	-	-	40	-	-	-
1991	-	6.90	-	-	9	-	-	-	3.0*	3.2*	3.4*	6	1.6	1.6	1.6	39	-	-	-
1992	-	6.85	4.5	-	10	-	-	-	2.8*	3.0*	3.2*	5	0.8	2.1	3.1	-	-	-	-
1993	10	6.40	5.9	-	10	-	-	-	3.0*	3.1*	3.3*	3	1.2	2.1	2.8	-	-	-	-
1994	13	6.37	5.5	-	10	-	-	-	3.1*	3.2*	3.4*	5	1.8	2.8	3.6	41	-	-	38
1995	11	-	4.5	-	9	-	-	-	2.8*	3.0*	3.2*	4	-	-	-	-	-	-	-

LAKE: KEZAR L (VLMP 17)
TOWN: LOVELL
COUNTY: OXFORD

MIDAS: 97
*TRUE BASIN: 3
*SAMPLE STATION: 3

SUMMARY OF CHEMICAL AND TROPHIC STATE PARAMETERS:

	MEAN COLOR (SPU)	MEAN pH	MEAN ALK (mg/l)	MEAN COND. (uS /cm)	TOTAL PHOS. MEANS (ppb) EPI CORE	SURF GRAB	BOT. GRAB	PRO. GRAB	SECCHI DISK (m.) MIN.	MEAN	MAX.	N	CHLOROPHYLL A(ppb) MIN.	MEAN	MAX.	TROPHIC STATE INDICES EPI PHOS C	G	SEC	CHL
YEAR																			
1996	18	7.05	4.0	-	8	-	-	-	3.0*	3.2*	3.4*	5	1.4	2.5	4.3	35	-	-	35
1997	16	6.97	5.0	-	6	-	-	-	2.5*	3.0*	3.3*	5	1.4	2.4	4.0	31	-	-	34
1998	22	6.94	6.0	-	8	-	-	-	2.5*	3.1*	3.5*	5	1.8	3.3	6.2	36	-	-	42
1999	17	6.73	5.3	-	8	-	-	-	2.9*	3.1*	3.3*	5	1.6	3.0	3.9	37	-	-	40
2000	15	6.70	5.2	-	9	-	-	-	2.9*	3.1*	3.3*	5	1.8	2.5	3.0	41	-	-	35
2001	15	6.91	5.0	-	9	-	-	-	2.9*	3.2*	3.3*	5	1.8	2.7	3.7	39	-	-	37
2002	12	6.62	3.9	-	14	6	8	-	3.1*	3.3*	3.5*	4	1.1	2.1	2.7	-	-	-	-
2003	10	6.57	3.8	27	9	9	-	-	3.1*	3.2*	3.4*	6	2.0	2.6	3.2	-	-	-	-
2004	13	6.52	4.0	-	8	7	-	-	3.1*	3.2*	3.3*	5	1.1	2.0	2.7	-	-	-	30
2005	13	6.59	4.5	16	8	-	-	-	3.0*	3.5*	4.0*	6	0.9	2.3	3.1	35	-	-	33
2006	8	-	5.3	-	8	7	-	-	2.4*	3.4*	3.9*	5	1.4	2.3	4.6	-	-	-	33
2007	11	6.60	4.8	-	10	7	-	-	3.0*	3.4*	3.7*	5	1.4	2.5	3.1	-	-	-	35
2008	-	-	-	-	-	-	-	-	2.8*	3.4*	4.1*	4	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	3.1*	3.1*	3.1*	1	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	3.5*	3.7*	3.8*	3	-	-	-	-	-	-	-
SUMMARY:	14	6.59	4.8	22	9	7	8	-	1.9*	3.2*	4.8*	30	0.8	2.4	6.2	38	-	-	36

LATE SUMMER TEMPERATURE / DISSOLVED OXYGEN PROFILES:

	SAMPLE DATE															
DEPTH	08/11/05		09/13/05		08/24/06		09/22/06		08/16/07		09/20/07		08/21/08		09/18/08	
m	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm	°C	ppm
0.0	26.9	8.0	23.4	8.1	23.7	7.9	20.4	8.2	24.1	8.0	20.4	9.1	21.3	8.9	19.6	8.5
1.0	26.9	8.0	22.5	8.1	23.1	8.0	19.9	8.2	24.1	8.0	19.1	9.3	21.4	8.8	19.6	8.5
2.0	26.7	8.0	22.2	8.3	23.0	8.1	19.8	8.2	24.1	8.0	18.7	9.4	21.4	8.8	19.6	8.4
3.0	26.2	8.1	22.1	8.3	-	-	19.6	8.2	24.1	8.0	-	-	21.4	8.8	19.6	8.1
4.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

WATER QUALITY SUMMARY

KEZAR LAKE, Lovell
Midas: 0097, Station: 03

The Maine Department of Environmental Protection (ME-DEP) and the Volunteer Lake Monitoring Program (VLMP) have collaborated in the collection of lake data to evaluate water quality, track algal blooms, and determine water quality trends. This dataset does not include bacteria, mercury, or nutrients other than phosphorus.

Water quality monitoring datasets for this station in Kezar Lake have been collected since 1976. During this period, 18 years of basic chemical information was collected in addition to Secchi Disk Transparencies (SDT). This information, in addition to data collected from Station 01 indicates that the water quality of Kezar Lake is excellent.

Water Quality Measures: Station 03 of Kezar Lake is a non-colored (average color 14 SPU) with an average SDT of 3.1m (10ft). Most of these readings are limited by the depth of the station and are thus an underestimate of water quality. The range of water column TP for Station 03 of Kezar Lake is 6 to 14 parts per billion (ppb) with an average of 9 ppb, while Chla ranges from 0.8 to 6.2 ppb with an average of 2.4 ppb.

Recent dissolved oxygen (DO) profiles show no DO depletion at this site. Dissolved oxygen data obtained from the deepest station indicate good levels there as well. The potential for TP to leave the bottom sediments and become available to algae in the water column (internal loading) is also low. Oxygen levels below 5 parts per million stress certain cold water fish, and a persistent loss of oxygen may eliminate or reduce habitat for sensitive cold water species.

See ME-DEP Explanation of Lake Water Quality Monitoring Report for measured variable explanations. Additional lake information can be found on the Internet at http://www.lakesofmaine.org/ and/or http://www.maine.gov/dep/blwq/lake.htm, or telephone the ME-DEP at 207-287-3901 or the VLMP at 207-783-7733.

Filename: keza0097_03, Revised: 12/06, By: lb